

REMARKS

The Office Action dated May 4, 2010, has been received and carefully noted. The above amendments and following remarks are being submitted as a full and complete response thereto. Claims 1-2, 6-9 and 19-20 are pending in this application and claims 10-18 are withdrawn. By this Amendment, claims 1 and 19 are amended. No new matter has been added and the amended subject matter has already been offered for examination. Reconsideration of the rejection of the claims is respectfully requested.

The Office Action rejects claims 1-3, 6-9 and 19-20 under 35 U.S.C. § 103(a) as being obvious over Ishibashi (U.S. Patent No. 6,375,756) in view of Bridges (U.S. Patent No. 5,012,868) and Reale (U.S. Patent No. 5,451,754). The rejection is respectfully traversed.

In particular, the above-identified application claims a self-cleaning catalytic chemical vapor deposition apparatus that includes a power supply to apply a bias voltage to a resistance heated catalytic body, a changeover switch that changes the polarity of the bias voltage, a cleaning gas that comprises one of an inert gas or a reducing gas, a gas-supply port through which the cleaning gas is introduced in the reaction chamber, means for setting the bias voltage applied to the catalytic body, and the polarity of the bias voltage, upon removing the adhering film including a changeover switch that changes the polarity of the bias voltage to be applied, and means for heating the catalytic body at about 1700 °C during substantially an entire duration of self-cleaning, wherein the cleaning gas removes an adhering film while suppressing etching of the catalytic body itself when the cleaning gas comes into contact with the resistance

heated catalytic body, and the changeover switch changes the polarity of the set bias voltage based on a kind of the cleaning gas, as recited in amended claims 1 and 19.

Applicants note with satisfaction that the Patent Office no longer has the position that the claimed apparatus does not have a cleaning gas.

The Patent Office asserts that “the newly added [means-plus-function] limitation...will not be treated as 35 U.S.C. 112, 6th paragraph” and makes the determination that the newly claimed means-plus-function limitation corresponds to the changeover switch (Office Action, page 2, lines 15-21). However, the Patent Office has no grounds to make such a determination. The claimed means-plus-function limitation is supported at least on page 14, lines 5-25 of Applicants’ specification, which provides ample support for the claimed feature of means for setting the bias voltage applied to the catalytic body, and the polarity of the bias voltage, upon removing the adhering film. For example, the means for setting the bias voltage may include the controller 10, the constant-voltage power supply 8 and the changeover switch 8a. Additionally, the claimed feature of means for setting the bias voltage upon removing an adhering film is clearly supported in the Specification at least on page 15, lines 5-20. The Patent Office cannot on its own volition determine that the claimed means-plus-function limitation only corresponds to the lone changeover switch. The Patent Office must find, in the applied references, an equivalent structure fulfilling an equivalent function, of the claimed means for setting the bias voltage.

Ishibashi teaches a “method for efficiently and completely removing a film deposited inside a film forming chamber and an in-situ cleaning method of a hot element CVD apparatus” (Abstract). The Office Action admits that Ishibashi fails to

teach the claimed feature of means for setting the bias voltage and relies on Bridges to cure this deficiency. Bridges teaches applying a “low D.C. bias voltage to the heating circuit...to inhibit corrosion of the downhole heating electrode” (Col. 4, lines 1-4).

However, Bridges merely teaches applying a DC bias voltage to the heating circuit to inhibit corrosion (Col. 4, lines 1-4) and a switch 238 to adjust positive and negative polarity. However, Bridges does not teach an equivalent structure fulfilling an equivalent function of the claimed means for setting a bias voltage, as described in the above-discussed portions of the Specification of the current application (page 14, lines 5-25 and page 15, lines 5-20), the means including at least the controller 10, the constant-voltage power 8 and the changeover switch 8a.

Bridges also fails to teach that the D.C. bias voltage is applied upon removing an adhering film via, for example, a detection of the voltage across the terminals by the controller 10. Accordingly, there is no teaching in Bridges of the specifically claimed function and, thus, the specifically claimed means for setting the bias voltage and the polarity of the bias voltage upon removing the adhering film, as recited in amended claims 1 and 19.

For at least a combination of the reasons above, Applicants submit that Ishibashi fails to disclose or suggest all the features of amended claims 1 and 19.

Reale teaches a corona generating device for depositing a negative charge on an imaging surface carried on a conductive substrate held at a reference potential (Abstract). However, Reale fails to cure the deficiencies in Ishibashi and Bridges in disclosing or rendering obvious at least a combination of the above-discussed features of amended claims 1 and 19.

For at least a combination of the above reasons, a combination of the applied references fails to arrive at the subject matter of amended claims 1 and 19.

Accordingly, amended claims 1 and 19, and dependent claims 2-3, 6-9 and 20, are patentable over all of the applied references, and withdrawal of the rejection of the claims under 35 U.S.C. § 103(a) is respectfully requested.

Should the Examiner determine that any further action is necessary to place this application into better form for allowance, the Examiner is encouraged to telephone the undersigned representative at the number listed below.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, referencing Attorney Dckt. No. 029567-00010.

Respectfully submitted,



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Attachment: Request for Continued Examination (RCE)

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